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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,576	09/15/2003	Shunta Shiraishi	P69053US0	7972

136 7590 07/05/2005

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 WASHINGTON, DC 20004

EXAMINER

SPAHN, GAY

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/661,576	Applicant(s) SHIRAISHI, SHUNTA	
	Examiner Gay Ann Spahn	Art Unit 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-30 is/are pending in the application.
- 4a) Of the above claim(s) 25-30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-24 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 11-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions - Restriction Requirement

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 11-24, drawn to a method of preventing seismic liquefaction, classified in class 405, subclass 302.4.
- II. Claims 25-30, drawn to a system of preventing seismic liquefaction, classified in class 405, subclass 128.15.

Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the method of preventing seismic liquefaction as claimed can be practiced with another materially different product such as one which does not have a main water pipe and reverse flow main pipe, and the claimed system can be used to remediate contaminated soil in any given area and environment.

Newly submitted claims 25-30 are directed to an invention that is independent or distinct from the invention originally claimed for the reasons discussed above. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the

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merits. Accordingly, claims 25-30 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference characters not mentioned in the description: Fig. 14 has the reference characters "G.L" which are believed to represent the groundwater level, but are not discussed in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The lengthy specification appears to be a direct translation from a foreign language and has many grammatical errors. However, the specification has not been

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checked to the extent necessary to determine the presence of all possible minor errors.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. The following is but a few of the errors noted by the examiner.

The disclosure is objected to because of the following informalities:

- (1) page 6, line 24, the word "falls" should be changed to --fall--;
- (2) page 6, line 25, "PATNO." should be changed to --U.S. Patent No.--;
- (3) page 8, line 17, the word --a-- should be inserted after the word "are";
- (4) page 16, line 4, the word "projective" should be changed to --perspective--;
- (5) page 16, line 13, the word "equipments" should be changed to --equipment--;
- (6) page 16, line 14, the word --a-- should be inserted after the word "in";
- (7) page 16, lines 23, 31, 34, and 35, the word "clogging" should be changed to --clog--;
- (8) page 17, line 20, the words --fine-grained layer-- should be inserted after the word "loose";
- (9) page 17, line 31, the word "nearly" should be deleted; and
- (10) page 18, line 31, the word --and-- should be inserted between the words "water pipe" and the words "reverse flow main pipe".

Appropriate correction is required of the above-noted errors and any other errors of which Applicant becomes aware.

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Allowable Subject Matter

Claims 11-24 are allowed.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

This application is in condition for allowance except for the following formal matters:

corrections with respect to the drawing and specification objections stated above;
and
cancellation of claims 25-30.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 5,800,090 to Goughnour discloses apparatus and method for liquefaction remediation of liquefiable soils. U.S. Patent No. 6,792,720 to Hocking discloses seismic base isolation by electro-osmosis during an earthquake

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event. U.S. Patent No. 6,615,653 to Hocking discloses in situ method for determining soil liquefaction tendency and its prevention by electro-osmosis. U.S. Patent No. 6,308,135 to Hocking discloses soil liquefaction prevention by electro-osmosis during an earthquake event. U.S. Patent No. 6,508,609 to Knight et al. discloses method of forming an in-situ void system. U.S. Patent No. 6,846,130 to Goughnour discloses a method and apparatus for enhancement of prefabricated earth drains. U.S. Patent No. 6,312,190 to Goughnour discloses a method and apparatus for enhancement of prefabricated composite vertical drains. U.S. Patent No. 5,885,026 to Hwang discloses a system and method for containing leachate using submerged counterflow sink. U.S. Patent No. 5,282,699 to Hodge discloses a method and apparatus for densification of sands of silts. U.S. Patent No. 4,685,835 to Massarsch discloses a method of increasing the compressibility of liquid-saturated material. U.S. Patent No. 4,911,584 to Arenzana discloses a method for soil injection. U.S. Patent No. 4,540,316 to Takahashi discloses a composition for improving strength of soft ground containing organic matter, and method of improving strength of soft ground by utilizing said composition. U.S. Patent No. 4,309,129 to Takahashi discloses a method and apparatus for improving the strength of soft viscous ground. U.S. Patent No. 4,084,381 to Cain et al. discloses stabilization of earth subsurface layers. U.S. Patent No. 3,971,222 to Griffith, Jr. discloses soil stabilization. U.S. Patent No. 3,386,251 to Casagrande et al. discloses a method of strengthening and stabilizing compressible soils. U.S. Patent No. 1,987,626 to Klie discloses a process of and apparatus for filling cracks and crevices. U.S. Patent No. 5,435,666 to Hassett et al. discloses methods for isolating a water table and for soil

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remediation. U.S. Patent No. 823,749 to Wanner discloses a method of simultaneously mining and washing clay, kaolin, etc. U.S. Patent No. 6,089,788 to Sandanasamy discloses a vertical drain. U.S. Patent No. 6,511,262 to Kang discloses a solidified composition to strengthen weak stratum and constructing method using the same. U.S. Patent Application Publication No. 2003/0070589 to Boston discloses a soil stabilization composition. U.S. Patent No. 2005/0063790 to Nakakuma discloses reformation of soft soil and system therefor. U.S. Patent No. 4,465,518 to Miyoshi et al. discloses a process for strengthening soft soil. U.S. Patent No. 4,443,260 to Miyoshi et al. discloses method for strengthening soft soil. U.S. Patent No. 5,711,637 to I discloses a process of preventing liquefaction of structure foundation ground. U.S. Patent No. 6,071,411 to Grott discloses a method of treating soil for controlling dust and for effecting soil stabilization through the application of waste water. U.S. Patent No. 5,820,302 to Roberts et al. discloses a stabilizing soil and aggregate mixtures and structures. U.S. Patent No. 5,746,546 to Hubbs et al. discloses a soil stabilization composition and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

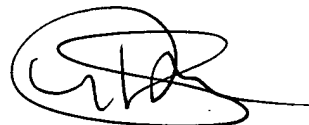
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571)-272-7049. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

^{GAS}
Gay Ann Spahn, Patent Examiner
June 27, 2005


HEATHER SHACKELFORD
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TECHNOLOGY CENTER 3600